

1. Identification

Product Identifier: **Polyaspartic Topcoat Hardener** For Use:
Industrial/Professional use only. Polytek
Manufacturer: Development Corp.
55 Hilton Street, Easton, PA 18042
Phone Number: 541-540-1976 (8 a.m. to 6:30 p.m. EST)
Emergency Phone: CHEMTREC 800-424-9300 or +1 703-527-3887
E-mail: sds@polytek.com

2. Hazards Identification

GHS Classification:

Acute Toxicity (Inhalation) – Category 4
Skin Sensitization – Category 1
Specific Target Organ Toxicity – Single Exposure Category 3

Label Elements: Warning



Hazard Phrases

H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

Precautionary Phrases

P261 Avoid breathing fumes, vapors, mists or sprays.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P304+P340 IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P317 Get medical help.
P319 Get medical help if you feel unwell.
P333+P317 If skin irritation or rash occurs: Get medical help.
P362+P364 Take off contaminated clothing and wash it before reuse.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents and container in accordance with local, regional and national regulations.

Supplemental Information: Individuals sensitized to isocyanates should discontinue use. Long-term overexposure to isocyanates may cause lung damage. This is one part of a two-part system. Read and understand the hazard information on Part B before using.

3. Composition/Information on Ingredients

Chemical Name	CAS #	%
Hexamethylene diisocyanate oligomers	28182-81-2	90-100

Exact concentrations are withheld as trade secret. Other ingredients are not listed because they are either not hazardous or are below concentration/cut-off thresholds.

4. First-Aid Measures

Eye Contact: Rinse thoroughly with water for at least 15 minutes, holding the eyelids open to be sure the material is washed out. Get medical attention if irritation develops or persists.

Skin Contact: Remove contaminated clothing. Wash contact area thoroughly with soap and water. Get medical attention if irritation

develops or persists. Launder clothing before reuse. Discard items that cannot be decontaminated.

Inhalation: Remove person to fresh air. Give artificial respiration if needed. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if you feel unwell.

Most Important Symptoms/Effects: Harmful if inhaled.

Indication of Immediate Medical Attention/Special Treatment: Get immediate medical attention if inhaled.

5. Fire-Fighting Measures

Extinguishing Media: Use water fog, foam, carbon dioxide or dry chemical. Do not use solid water stream. Solid stream of water into hot product may cause violent steam generation or eruption.

Specific Hazards: Not classified as flammable or combustible. Product will burn under fire conditions. Combustion products include oxides of carbon and nitrogen, isocyanates, hydrogen cyanide, dense smoke.

Special Protective Equipment & Precautions for Fire-Fighters: Wear positive pressure, self-contained breathing apparatus and full-body protective clothing. Cool fire-exposed containers with water.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency

Procedures: Remove all ignition sources. Clear non-emergency personnel from the area. Ventilate area. Wear appropriate protective clothing to prevent eye and skin contact and respiratory protection.

Methods and Materials for Containment and Cleanup: Cover with an inert absorbent material and collect into an appropriate container for disposal. Do not seal the container since CO₂ is generated on contact with moisture and dangerous pressure buildup can occur. Decontaminate floor area with a mixture of water plus isopropyl alcohol (20%), household ammonia (10%), and detergent (2%).

7. Handling and Storage

Safe Handling: Do not breathe fumes, vapors, mists, or sprays. Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep container closed when not in use.

Safe Storage: Store indoors at temperatures between 55 to 95°F (12°C to 35°C). Store in original, unopened containers. Protect from atmospheric moisture and water, since TDI reacts with water to form CO₂ leading to potentially dangerous pressure buildup in sealed containers.

8. Exposure Controls/Personal Protection

Occupational Exposure Limits: None established.

Ventilation: Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits.

Respiratory Protection: If needed (i.e., ventilation is inadequate), use a NIOSH-approved air-purifying, tight-fitting, half-face respirator with organic vapor cartridges. Respirator selection and use should be based on contaminant type, form and concentration. For higher exposures or in an emergency, use a supplied-air respirator. Use respirators in accordance with OSHA's Respiratory Protection Standard (29 CFR 1910.134).

Skin Protection: Wear impervious gloves, such as butyl rubber or nitrile rubber.

Eye Protection: Wear chemical safety goggles/glasses.

Other Protective Measures: Wear impervious clothing to prevent skin contact and contamination of personal clothing. An eye wash and washing facility should be available in the work area. Follow good Industrial Hygiene practices.

9. Physical and Chemical Properties

Appearance: Liquid, colorless to pale yellow
Odor: No data available
Odor Threshold: Not determined
pH: Not applicable
Melting Point: < -20°C (< -4°F)
Boiling Point: > 220°C (> 428°F)
Flash Point: 228°C (442°F)
Evap. Rate: No data available
Flamm. Limits: No data available
Vapor Pressure: No data available
Vapor Density: No data available
Relative Density: 1.13
Solubility: Insoluble in water
Partition Coefficient: n-octanol/Water: Reacts with water
Auto-Ignition Temp: No data available
Decomposition Temp: No data available
Viscosity: 600 cps

10. Stability and Reactivity

Reactivity: Diisocyanates react with many materials and the rate of reaction increases with temperature. Reaction with water generates carbon dioxide and heat.
Chemical Stability: Stable under recommended conditions.
Possibility of Hazardous Reactions: Elevated temperatures can cause hazardous polymerization. Polymerization can be catalyzed by strong bases or water. Reaction with water generates carbon dioxide, and results in heat and pressure buildup in closed systems.
Conditions to Avoid: Avoid moisture and temperatures below 55°F (12°C) and above 95°F (35°C) to protect product integrity.
Incompatible Materials: Avoid contact with water, acids, bases, alcohols, strong oxidizers, and some metals (e.g., aluminum, zinc, brass, tin, copper).
Hazardous Decomposition Products: Possibly isocyanate vapor, carbon monoxide, nitrogen oxides, and traces of hydrogen cyanide.

11. Toxicological Information

Eye Contact: May cause mild eye irritation.
Skin Contact: May cause mild skin irritation. May cause an allergic skin reaction.
Inhalation: Harmful if inhaled. May cause respiratory irritation, drowsiness or dizziness.
Ingestion: No data available.
Chronic Health Effects: May cause an allergic skin reaction.
Acute Toxicity Values: For Hexamethylene diisocyanate (CAS 28182-81-2):
 Oral LD₅₀ (rat): >2,500 mg/kg
 Dermal LD₅₀ (rabbit): >2,000 mg/kg
 Inhalation LC₅₀ (rat): 0.39 mg/L, 4hr.
Respiratory Sensitizers: Components are not classified as respiratory sensitizers.
Skin Sensitizers: May cause an allergic skin reaction.
Germ Cell Mutagens: Components are not classified as mutagens.
Carcinogenicity: Components are not classified as carcinogens.
Reproductive Toxins: Components are not classified as reproductive toxins.
Specific Target Organ Toxicity: May cause damage to organs through prolonged or repeated exposure.

12. Ecological Information

These products react with water to form insoluble polyureas. Movement in the aquatic and terrestrial environment is expected to be limited. They are not readily biodegradable and are not expected to bioaccumulate.

13. Disposal Considerations

Dispose according to local, state and federal regulations. Upon exposure to moisture, product forms an inert, non-hazardous solid. In the U.S., this product is not a RCRA hazardous waste (per 40 CFR 261).

14. Transport Information

Not regulated for transport in any mode.
 EMERGENCY SHIPPING: CHEMTREC, 800-424-9300 or +1-703-527-3887

15. Regulatory Information

U.S. FEDERAL REGULATIONS:
CERCLA 103 Reportable Quantity: The RQ for Hexamethylene diisocyanate is 100 lbs. Some States have more stringent requirements. Report spills in accordance with local and state regulations.
SARA TITLE III Section 311/312: Acute Health, Chronic Health
Section 313 Toxic Chemicals: This product contains chemicals subject to SARA Title III Section 313 Reporting requirements:
 Hexamethylene-di-isocyanate (CAS 822-06-0) <1%
EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on TSCA.
STATE REGULATIONS:
California Proposition 65: This product does not contain chemicals known to the State of California to cause cancer and/or reproductive harm. www.P65Warnings.ca.gov

16. Other Information

Training Advice: All personnel using/handling this product should be trained in proper chemical handling and the need for and use of engineering controls and protective equipment.
Recommended Uses and Restrictions: This product is intended for industrial/professional use only.
SDS Revision Notes: GHS Format: January 16, 2023
Disclaimer: The information contained herein is considered accurate; however, Polytek® Development Corp. makes no warranty regarding the accuracy of the information. The user must determine the suitability of the product for the intended use and accepts all risk and liability associated with that use.